NOAA
R 226

GENERAL NOTES:

1. THE VESSEL SHALL BE CLASSIFIED UNDER ABS MALTESE CROSS A1, CIRCLE E, UNRESTRICTED SERVICE AND ICE CLASS C0.
2. ALL MATERIAL SHALL BE ORDINARY STRENGTH STEEL, ABS GRADE A, UNLESS OTHERWISE NOTED.
3. DEEP TANK OVERFLOW HEIGHTS ARE ASSUMED AT THREE FEET ABOVE THE WEATHER DECK ABOVE THE TANK.
4. WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE NOAA "STATEMENT OF REQUIREMENTS" AND ACCEPTABLE COMMERCIAL MARINE QUALITY.
5. ALL WELDING SHALL BE IN ACCORDANCE WITH REFERENCE NO. 2.
6. END CONNECTION DETAILS SHALL BE IN ACCORDANCE WITH HMI STANDARDS, REFERENCE NO. 6.
7. STIFFENER & GIRDER END CONNECTIONS SHALL BE DESIGNATED AS FOLLOWS:
   "EC-S": CUT MEMBER ONE INCH SHORT
   "EC-W": WEB IS CONNECTED
   "EC-F": FULL CONNECTION – WEB AND FLANGE STRENGTH MAINTAINED.
   "EC-A": EFFECTIVE BRACKET PER ABS RULES, PART 3, SECTION 2.5.3
8. UNLESS OTHERWISE NOTED, ALL END CONNECTIONS SHALL BE "EC-F".
9. COPES, SNIPES AND DRAINS SHALL BE IN ACCORDANCE WITH HMI STANDARDS.
10. PLATES AND SHAPES ARE IN IMPERIAL UNITS. DIMENSIONS ARE IN MILLIMETERS.
11. FRAME SPACING = 600
12. THE DECK-TO-SHELL CONNECTION ON THE EXPOSED MAIN DECK SHALL BE ROUNDED WITH A 150 RADIUS.
13. GIRDERS SHALL BE FITTED WITH TRIPPING BRACKETS AT 3000 OR MAX. OF 5 FRAME SPACINGS.
14. OIL & WATER STOPS MUST BE PROVIDED AT THE ENDS OF TANK BOUNDARY PLATING & IN CONTINUOUS FRAMING EXTENDING THROUGH TANK BOUNDARIES. FOR ADJACENT TANKS, STOPS MUST PROVIDED ON BOTH SIDES OF THEIR COMMON BOUNDARIES.
15. THE CORNER RADIUS OF OPENINGS IN DECKS & SHELL, MUST BE GENERALLY 1/8 THE TRANSVERSE DIMENSION OF THE OPENING, WITH A MINIMUM OF 150 & A MAXIMUM OF 600. ON MAIN TRANSVERSE BULKHEADS, THE RADIUS MUST BE 1/20 OF THE VERTICAL WITH A MINIMUM OF 150.
16. FOR POSITIONS & DETAILS OF DOORS, HATCHES, MANHOLES & SCUTTLES SEE REF #15
17. SURFACE TOLERANCES FOR THE GENERATOR FOUNDATION (PLAN 51-C & PLAN 69-A) IS 1.0.

FUME-TIGHT (FT) BULKHEAD DETAILS

LOCATION	ORIENTATION	STIFFENER SPACING (mm)	PLATE THICKNESS (in)	STIFFENER TYPE	END CONN. TOP	END CONN. BOTTOM
TANK TOP	TRANSVERSE	625	1/4	L4x3x1/4	S	S
TANK TOP	LONG'L	600	1/4	L4x3x1/4	S	S
2ND DECK	TRANSVERSE	625	1/4	L3x2x1/4	S	S
2ND DECK	LONG'L	600	1/4	L3x2x1/4	S	S
MAIN DECK	TRANSVERSE	625	1/4	L3x2x1/4	S	S
MAIN DECK	LONG'L	600	1/4	L3x2x1/4	S	S

REVISIONS

REV	ZONE	DESCRIPTION	DATE	APPROVED
3 CONT'D		4. SHT 2, PLAN 10-C: ADDED ELEV. 22-B CALL-OUT TO LONG'L BHD. 5. SHT 3, SECT. 24-C: REVISED BHD TO SUIT NEW DOOR SIZE AND LOCATION. ADDED ELEV. 22-B FOR LOG'L BHD 980 OCL (S). ITEMS 1-3 PER ENG. DEVELOPMENT. ITEMS 4 & 5 PER PRN 002 DTD. 1/31/05.		
4		1. SH 1, EXTENDED HULL APPLICABILITY TO INCLUDE HULL 1957. 2. SH 1, ADDED SH 8 TO DRAWING INDEX. 3. SH 2, ELEVATION 10-C, CHANGED PLATE THICKNESS TO 1". 4. SH 2, ELEVATION 10-C, ADDED NOTE FOR APPLICABILITY. 5. SH 3, ELEVATION 21-B, ADDED NOTE FOR APPLICABILITY. 6. SH 3, ELEVATION 22-B, ADDED NOTE FOR APPLICABILITY. 7. SH 4, SECTION 27-C, ADDED NOTE FOR APPLICABILITY. 8. SH 5, SECTION 39-A, ADDED NOTE FOR APPLICABILITY. 9. SH 7, ELEVATION 54-A, ADDED NOTE FOR APPLICABILITY. 10. SH 8, ADDED TO SHOW SCANTLINGS SPECIFIC TO HULL 1956. ITEMS 1 THRU 3 PER ENGINEERING DEVELOPMENT ITEMS 4 THRU 10 PER ECP 056B.	7/18/06 MDP	7/24/06 SM
5		1. SH 1, THIS REVISION REFLECTS AS-BUILT CONDITIONS FOR HULL 1953. 2. SH 1, ADDED SH 9 TO DRAWING INDEX AND REVISION STATUS. 3. SH 1, ADDED GENERAL NOTE #17 SPECIFYING SURFACE TOLERANCES FOR GENERATOR FOUNDATION. 4. SH 7, PLAN 51-C, ADDED NOTE REGARDING APPLICABILITY. 5. SH 7, PLAN 51-C, ADDED STRUCTURE TO M282 GENERATOR FDN TO MATCH AS-BUILT CONDITION. ITEMS 1 THRU 5 PER ENGINEERING DEVELOPMENT	8/22/06 MDP	

REVISIONS

REV	ZONE	DESCRIPTION	DATE	APPROVED
1		1. SH 3, ELEV. 20-C: REVISED LONG'L GIRDER TRANSITION BKT FROM STRAIGHT TO RADIUS CUT TO CLEAR HPU MOTOR PULL SPACE. 2. SH 5, SECT. 36-A: DELETED 1/4 PL BKTS (NS) W/4x3/8 RIDER PLATES AND REINSTATED L4x3x1/4 TO SUIT REMOVAL OF BUILT-IN WINCH FOUNDATION. 3. SH 5, SECT. 36-C: DELETED 3/8 PL TAB LOCATED IWO CL ABOVE 4500 FLAT FOR BUILT-IN WINCH FDN. PLATE REMOVED TO SUIT REMOVAL OF SAID WINCH FDN. 4. SH 5, SECT. 34-B: DELETED BUILT-UP FLOOR STRUCTURAL ASSY ABOVE 4500 ABL TO SUIT REMOVAL OF BUILT-IN WINCH FDN. 5. SH 5, SECT. 34-D: DELETED 1/4 PL BKTS (NS/FS) W/4x3/8 RIDER PLATES AND REINSTATED L4x3x1/4 TO SUIT REMOVAL OF BUILT-IN WINCH FDN. 6. SH 7, ELEV. 54-A: DELETED BUILT-UP FLOOR STRUCTURAL ASSY ABOVE 4500 ABL TO SUIT REMOVAL OF BUILT-IN WINCH FDN. 7. SH 7, PLAN 55-C: DELETED RAISED PLATFORM USED AS PART OF WINCH FDN. 8. SH 2, PLAN 14-C: REVISED DIMENSIONS TO LONG'L DECK GIRDER BELOW STBD CRANE PEDESTAL FROM 5000 TO 5290 AND FROM 625 TO 570 TO SUIT RELOCATION OF STBD CRANE PEDESTAL. 9. SH 2, PLAN 10-C: RELOCATED STBD CRANE PEDESTAL FROM 5400 TO 5700 OCL AND REVISED DK STRUCTURE AS FOLLOWS; REDUCED SIZE OF 3/4" INSERT PL FROM 5000 x 2700 TO 3400 x 2700, DELETED TWO OUTBD. RADIAL GIRDERS AND REVISED DK OVERHANG STIFFENERS TO SUIT, REVISED TRSV. GIRDERS AT FRS. 78 AND 79 TO STOP AT LONG'L. BHD 6300 OCL, DELETED 19 1/2 x 1/4 COAMING AT FRS 78 & 79, AND CHANGED END CONNECTION "EC-W" EXTENTS FROM FR. 69 – 77 TO FR. 69 – AFT FOR THE DK OVERHANG STIFFENERS. MODIFIED WEATHER-TIGHT BHD, 6300 OCL, WITH A KNUCKLE ADDED AT FRAME 81. 10. SH 3, ELEV. 20-C: REVISED LOCATION OF LONG'L GIRDERS FROM 5000 AND 5625 TO 5290 AND 5860 OCL, RESPECTIVELY. 11. SH 3, ELEV. 23-A: REVISED BHD TO SUIT RELOCATION OF CRANE PEDESTAL WITH THE FOLLOWING CHANGES; DELETED PORTLIGHT AT FR. 78, RELOCATED DOOR TO FR. 77, DELETED 1/2" PLATE INSERT, RELOCATED FREEING PORT FROM FR. 76 1/2 TO FR. 78 1/2, MODIFIED BHD STIFFENERS TO SUIT RELOCATION OF CUTOUTS, DELETED L6x4x5/16 FROM BHD, ADDED A KNUCKLE AT FR. 81 TO ALLOW THE BHD TO PERPENDICULARLY INTERSECT THE CRANE PEDESTAL. 12. SH 5, SECT. 34-A: RELOCATED STBD GIRDERS TO SUIT CRANE PEDESTAL RELOCATION. 13. SH 6, SECT. 42-A: RELOCATED STBD CRANE PEDESTAL FROM 5400 TO 5700 OCL AND SHIFTED DECK GIRDERS TO SUIT. REVISED BHD TO SUIT PEDESTAL RELOCATION WITH THE FOLLOWING CHANGES; EXTENDED HEADERS IWO BHD CUTOUT, EXTENDED BHD STIFFENERS TO WN DK THAT WERE IN LINE OF THE LONG'L DK GIRDERS, ADDED TWO NEW BHD STIFFENERS TO SUIT RELOCATED DECK GIRDERS. 14. SH 3, ELEV. 24-B: CHANGED 1/2" INSERT PL TO 5/16" THK. 15. SH 2, PLAN 10-C: ADDED 5/16" INSERT PL IWO NET REEL FOUNDATION, P/S. ITEM 1 PER PRN #001, DTD 1/28/04. ITEMS 2 THRU 7 PER REWORK #741-0004 ITEMS 8 THRU 15 PER ENGINEERING DEVELOPMENT	1/28/04 AGE 2/26/04 AGE 3/22/04 AGE 3/30/04 AGE	4/5/04 RG
2		1. SH 2, PLAN 14-C: REVISED DIMENSIONS TO LONG'L DECK GIRDER BELOW STBD CRANE PEDESTAL FROM 5290 TO 5000 AND FROM 570 TO 625 TO SUIT RELOCATION OF STBD CRANE PEDESTAL. 2. SH 2, PLAN 10-C: RELOCATED STBD CRANE PEDESTAL FROM 5700 TO 5400 OCL AND REVISED DK STRUCTURE AS FOLLOWS; INCREASED SIZE OF 3/4" INSERT PL FROM 3400 x 2700 TO 5000 x 2700, ADDED TWO OUTBD. RADIAL GIRDERS AND REVISED DK OVERHANG STIFFENERS TO SUIT, REVISED TRSV. GIRDERS AT FRS. 78 AND 79 TO EXTEND TO OUTBOARD OVERHANG, ADDED 19 1/2 x 1/4 COAMING AT FRS 78 & 79, AND CHANGED END CONNECTION "EC-W" EXTENTS FROM FR. 69 – AFT TO FR. 69 – 77 FOR THE DK OVERHANG STIFFENERS. DELETED KNUCKLE AT FR. 81 IN WEATHER-TIGHT LONGITUDINAL BULKHEAD, 6300 OCL, FOR CRANE PEDESTAL. 3. SH 3, ELEV. 20-C: REVISED LOCATION OF LONG'L GIRDERS FROM 5290 AND 5860 TO 5000 AND 5625 OCL, RESPECTIVELY. 4. SH 3, ELEV. 23-A: REVISED BHD TO SUIT RELOCATION OF CRANE PEDESTAL WITH THE FOLLOWING CHANGES; REINSTATED PORTLIGHT AT FR. 78, RELOCATED DOOR TO FR. 80, ADDED 1/2" PLATE INSERT, RELOCATED FREEING PORT FROM FR. 78 1/2 TO FR. 76 1/2, MODIFIED BHD STIFFENERS TO SUIT RELOCATION OF CUTOUTS, ADDED L6x4x5/16 TO BHD. DELETED KNUCKLE AT FR 81. 5. SH 5, SECT. 34-A: RELOCATED STBD GIRDERS TO SUIT CRANE PEDESTAL RELOCATION. 6. SH 6, SECT. 42-A: RELOCATED STBD CRANE PEDESTAL FROM 5700 TO 5400 OCL AND SHIFTED DECK GIRDERS TO SUIT. REVISED BHD TO SUIT PEDESTAL RELOCATION WITH THE FOLLOWING CHANGES; SHORTENED HEADERS IWO BHD CUTOUT, SHORTENED BHD STIFFENERS IWO THE LONG'L DK GIRDERS. DELETED BULKHEAD STIFFENERS THAT WERE ADDED IN REV. 1. 7. SH 7, ELEV. 24-B: REVERT 5/16" PL INSERT TO 1/2" TO SUIT ORIGINAL CONFIGURATION. ITEMS 1 THRU 7 PER PROGRAM MANAGER.	8/10/04 RMW	8/11/04 RG
3		1. EXTENDED HULL APPLICABILITY TO INCLUDE HULL 1956. 2. SH 3, ELEV. 23-B & 21-C: SPECIFIED PIPE STUB TO BE SHIPYARD SUPPLIED. 3. SH 5, SECT. 34-B REVISED CALLOUT TO INCLUDE FR 74 TO BE FITTED W/ FB IWO LH. (CONT'D ZONE 4-D)	3/21/05 RMW	3/30/05 RG

DOCUMENT DISTRIBUTION RECORD

DATE IN ROOM	12/23/03	4/5/04	8/12/04	3/28/05	7/18/06	8/22/06								
ISSUE DATE	1/5/04	4/7/04	8/16/04	5/30/05	7/24/06									
REV#	0	1	2	3	4	5								
PROJECT ENG	1	1	1	1	1									
PROJECT MGR	1	1	1	1	1									
ABS	10													
USPH														
USCG														
HMP PC	12	12	12	12	12	1								
PROD DESIGN GROUP	1(3)	1(3)	1(3)	1(3)	1(3)	1								
HULL MGR														
HULL LEAD	(1)	(1)	(1)	(1)	(1)	1								
HVAC	1	1	1	1	1									
JOINER	1	1	1	1	1									
HPG PC	3	3(1)	3(1)	3(1)	3(1)	1								
NOISE CONT														
CHAND LLC														
ISSUED BY	AE	AE	AE	AE	SM									

AS-BUILT (5.1)

FUNCTIONAL DESIGN DRAWING NOT FOR CONSTRUCTION

DRAWING INDEX

SH	DESCRIPTION
9	GENERATOR FOUNDATION M283/M284 (5.2, 4.2)
8	M283 PLANS & ELEVATIONS
7	PLANS & ELEVATIONS
6	SECTIONS
5	SECTIONS
4	SECTIONS
3	BHDS & SHELL, SECTIONS & ELEVATIONS
2	PLANS – BELOW TANK TOP TO 01 LEVEL
1	TITLE

REFERENCES

NO.	TITLE	DRAWING NUMBER
15	STRUCTURAL DOORS, HATCHES, MANHOLES & SCUTTLES	M282-167-FH62
14	MISCELLANEOUS FOUNDATION BOOKLET	M282-180-FH43
13	CATCH HANDLING EQUIPMENT KEY PLAN & DETAILS	M282-085-FH86
12	GENERATOR INTERMEDIATE MASS RAFT DETAILS	M282-073-FP22
11	OCEANOGRAPHIC WINCH FDN, LAYOUT & DETAILS.	M282-591-FH79
10	PILOTHOUSE SCANTLINGS, 03-04 LVL	M282-110-FH14
9	AFT HOUSE SCANTLINGS, 01-03 LVL FR 39-AFT	M282-110-FH12
8	BULWARKS – LAYOUT & SCANTLINGS	M282-111-FH17
7	DECK FITTINGS & TIEDOWNS-KEY PLAN & DETAILS	M282-611-FH89
6	TYPICAL STRUCTURAL DETAILS	M282-100-FH67
5	HULL MIDBODY SCANTLINGS	M282-110-FH03
4	HULL TRANSOM SCANTLING	M282-110-FH05
3	BILGE KEEL LAYOUT	M282-110-FH54
2	WELDING BOOKLET	M282-100-FH90
1	BOSSING AND STERN FRAME	M282-100-FH18

HULL APPLICABILITY (3.1)

M282 HULL 1953
M283 HULL 1956
M284 HULL 1957 (4.1)

REVISION STATUS

REV	5	4	5	2	4	4	4	4	5
SHT	9	8	7	6	5	4	3	2	1

DRL NUMBERS

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VT Halter Marine, Inc.
Vidon Technologies Systems

VESSEL: FRV40 CLASS 63m FISHERIES RESEARCH VESSEL

DRAWN BY	WH 8/04/01	ABS APPV	
CHECKED BY	AE 12/22/03	USCG APPV	
APPROVED BY	RG 12/23/04	OWNER APPV	

TITLE: HULL STERNBODY SCANTLINGS FR. 49 – FR. 82

HULL NO	CAGE CODE	SIZE
APPLICABILITY	3B213	D

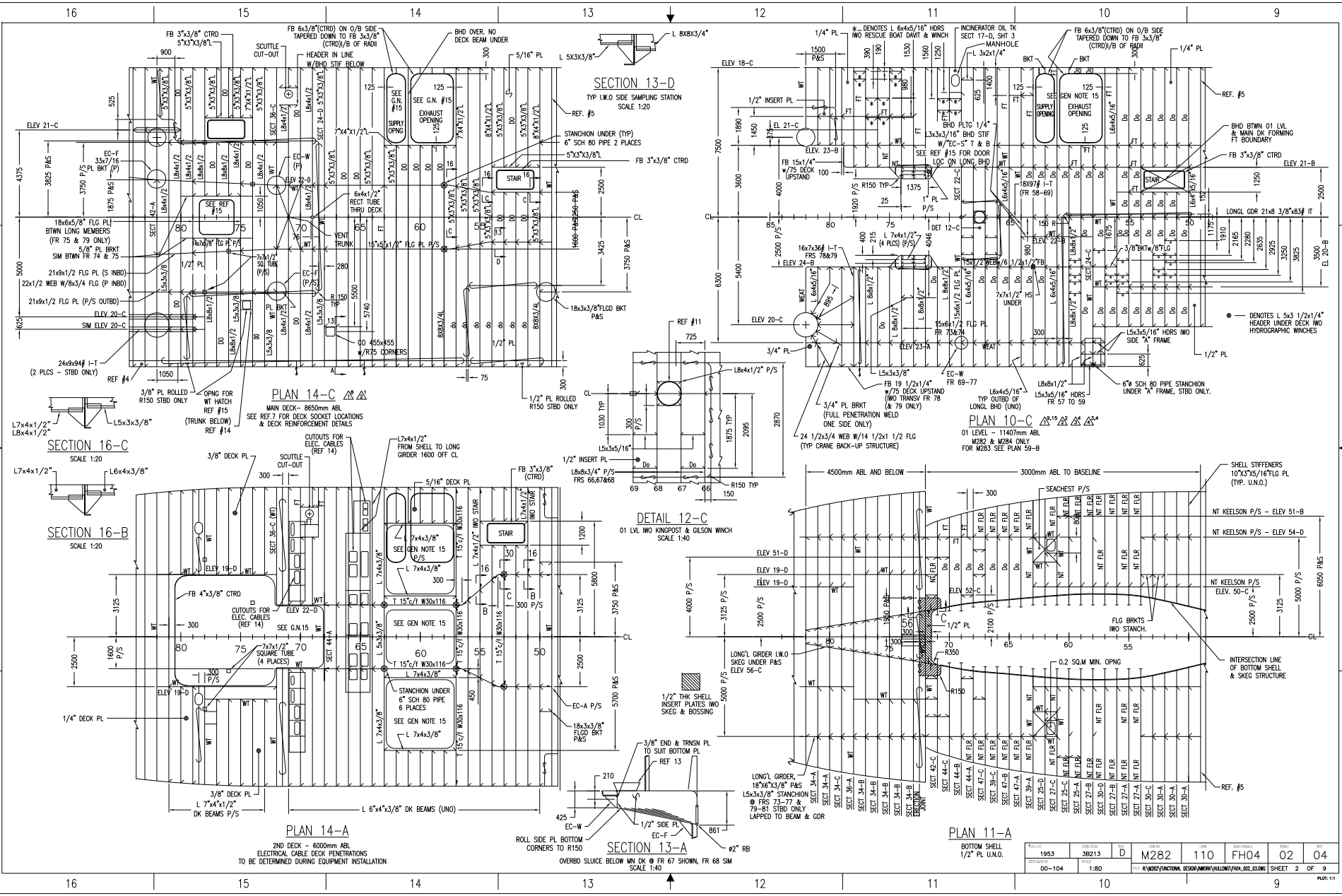
ESTIMATE NO: 00-104 | SCALE: NONE

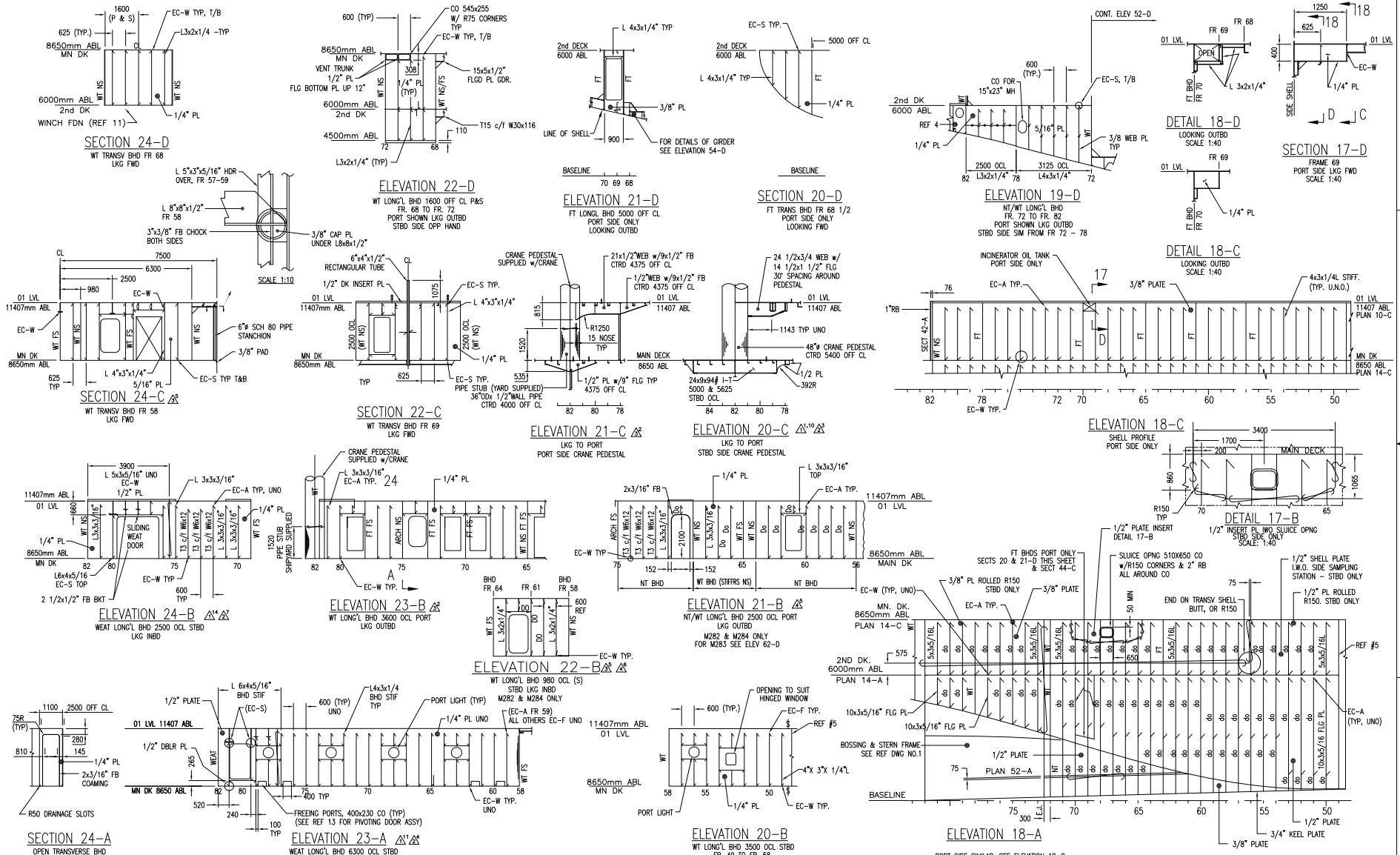
JOB NO.	ITEM	DELIVERABLE	SHEET	REV
M282	110	FH04	001	05

FILE R:\M282\FUNCTIONAL DESIGN\NWORK\HULLDWGS | SHEET 1 OF 9

PLOT: 1=1

DWG NO: M282-110-FH04 SH 1


PLAN 14-C
MAIN DECK- 8650mm ABL
SEE REF.7 FOR DECK SOCKET LOCATIONS & DECK REINFORCEMENT DETAILS
SECTION 13-D
TYP I.W.O SIDE SAMPLING STATION
SCALE 1:20
PLAN 10-C
01 LEVEL - 11407mm ABL
M282 & M284 ONLY
FOR M283 SEE PLAN 59-B
SECTION 16-C
SCALE 1:20
SECTION 16-B
SCALE 1:20
DETAIL 12-C
01 LVL IWO KINGPOST & GILSON WINCH
SCALE 1:40
PLAN 14-A
2ND DECK - 6000mm ABL
ELECTRICAL CABLE DECK PENETRATIONS
TO BE DETERMINED DURING EQUIPMENT INSTALLATION
SECTION 13-A
OVERBD SLUICE BELOW MN DK @ FR 67 SHOWN, FR 68 SIM
SCALE 1:40
PLAN 11-A
BOTTOM SHELL
1/2" PL U.N.O.
DENOTES L 5x3 1/2x1/4" HEADER UNDER DECK IWO HYDROGRAPHIC WINCHES
DENOTES L 6x4x5/16" HDRS IWO RESCUE BOAT DAVIT & WINCH
INCINERATOR OIL TK SECT 17-D, SHT 3
MANHOLE
BHD BTWN 01 LVL & MAIN DK FORMING FT BOUNDARY
LONGL GDR 21x8 3/8"x83# IT
INTERSECTION LINE OF BOTTOM SHELL & SKEG STRUCTURE
0.2 SQ.M MIN. OPNG
SHELL STIFFENERS 10"X3"X5/16"FLG PL (TYP. U.N.O.)
NT KEELSON P/S - ELEV 51-B
NT KEELSON P/S - ELEV 54-D
NT KEELSON P/S ELEV. 50-C
SEACHEST P/S
4500mm ABL AND BELOW
3000mm ABL TO BASELINE
1/2 THK SHELL INSERT PLATES IWO SKEG & BOSSING
LONG'L GIRDER I.W.O SKEG UNDER P&S ELEV 56-C
LONG'L GIRDER, 18"X6"X3/8" P&S
L5x3x3/8" STANCHION @ FRS 23-77 & 79-81 STBD ONLY LAPPED TO BEAM & GDR
FLG BRKTS IWO STANCH.
1/2" PL
R350
R150
R150 TYP
SECTION JOINT
REF #5
REF #11
REF #4
REF 13
SEE GEN NOTE 15
SEE G.N. #15
EXHAUST OPENING
SUPPLY OPNG
STAIR
SCUTTLE CUT-OUT
HEADER IN LINE W/BHD STIF BELOW
FB 6x3/8"(CTRD) ON O/B SIDE TAPERED DOWN TO FB 3x3/8" (CTRD)/B OF RADII
BHD OVER. NO DECK BEAM UNDER
5/16" PL
L 5X3X3/8"
L 8X8X3/4"
STANCHION UNDER (TYP) 6" SCH 80 PIPE 2 PLACES
FB 3"x3/8" CTRD
6x4x1/2" RECT TUBE THRU DECK
18x6x5/8" FLG PL BTWN LONG MEMBERS (FR 75 & 79 ONLY)
5/8" PL BRKT SIM BTWN FR 74 & 75
21x9x1/2 FLG PL (S INBD)
22x1/2 WEB W/8x3/4 FLG (P INBD)
21x9x1/2 FLG PL (P/S OUTBD)
ELEV 20-C
SIM ELEV 20-C
ELEV 21-C
24x9x94# I-T (2 PLCS - STBD ONLY)
3/8" PL ROLLED R150 STBD ONLY
OPNG FOR WT HATCH REF #15 (TRUNK BELOW) REF #14
1/2" PL ROLLED R150 STBD ONLY
18x3x3/8"FLGD BKT P&S
VENT TRUNK
15"x5"x1/2" FLG PL P/S
7x7x1/2" SQ TUBE (P/S)
PL BKT
60 455x455 W/R75 CORNERS
L7x4x1/2"
L8x4x1/2"
L5x3x3/8"
L6x4x3/8"
ELEV 18-C
ELEV 22-B
ELEV 24-B
ELEV 23-A
ELEV. 23-B
1/2" INSERT PL
BHD PLTG 1/4"
L3x3x3/16" BHD STIF W/"EC-S" T & B
SEE REF #15 FOR DOOR LOC ON LONG BHD
FB 15x1/4" W/75 DECK UPSTAND
18X97# I-T (FR 58-69)
L 7x4x1/2" (4 PLCS) (P/S)
16x7x36# I-T FRS 78&79
15x1/2 WEB 6 1/2x1/2"FB
7x7x1/2" UNDER
15x6x1/2 FLG PL
FR 73&74
3/4" PL
3/4" PL BRKT (FULL PENETRATION WELD ONE SIDE ONLY)
24 1/2x3/4 WEB W/14 1/2x1 1/2 FLG (TYP CRANE BACK-UP STRUCTURE)
FB 19 1/2x1/4" W/75 DECK UPSTAND (IWO TRANSV FR 78 (& 79 ONLY)
L6x4x5/16" TYP OUTBD OF LONGL BHD (UNO)
L8x8x1/2"
L5x3x5/16" HDRS FR 57 TO 59
L5x3x5/16" HDRS IWO SIDE "A" FRAME
6"ø SCH 80 PIPE STANCHION UNDER "A" FRAME, STBD ONLY.
3/8"BKTw/8"FLG
L8x4x1/2" P/S
L8x8x3/4" P/S FRS 66,67&68
1/2" INSERT PL
L5x3x5/16"
R150 TYP
L7x4x1/2" FROM SHELL TO LONG GIRDER 1600 OFF CL
CUTOUTS FOR ELEC. CABLES (REF 14)
3/8" DECK PL
5/16" DECK PL
1/4" DECK PL
FB 4"x3/8" CTRD
7x7x1/2" SQUARE TUBE (4 PLACES)
L 7x4x3/8"
T 15"c/f W30x116
L 7"x4"x1/2" DK BEAMS P/S
L 6"x4"x3/8" DK BEAMS (UNO)
3/8" END & TRNSN PL TO SUIT BOTTOM PL
ROLL SIDE PL BOTTOM CORNERS TO R150
1/2" SIDE PL
ø2" RB
EC-W
EC-F
EC-A P/S
1/2" THK
1/2" PL U.N.O.
DWG NO: M282-110-FH04 SH 2
1953
3B213
D
M282
110
FH04
02
04
00-104
1:80
R:\M282\FUNCTIONAL DESIGN\NAVORK\HULLDWG\FH04_002_03.DWG
SHEET 2 OF 9
PLOT: 1:1

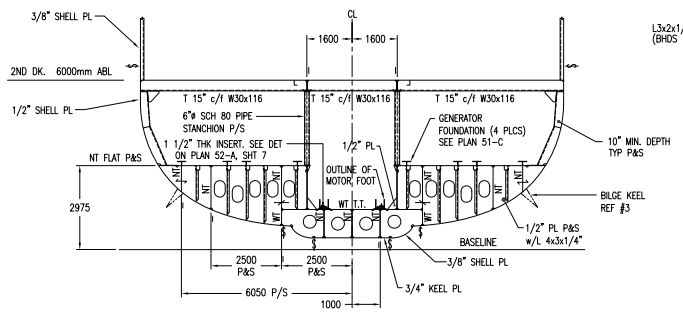


HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1953	3B213	D	M282	110	FH04	03	04
ESTIMATE NO	SCALE						
00-104	1:80						

FILE R:\M282\FUNCTIONAL DESIGN\NWORK\HULLDWG\FH04-003-03.DWG SHEET 3 OF 9

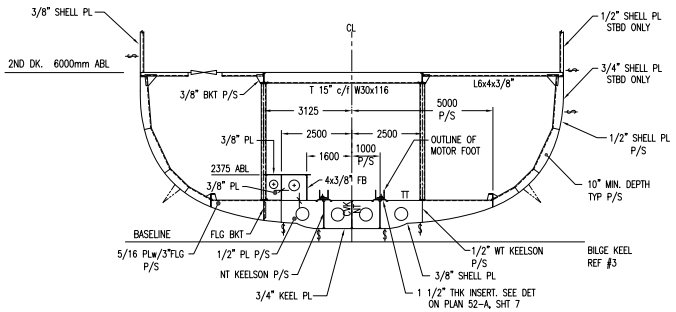
PLOT: 1:1

DWG NO. M282-110-FH04 SH3



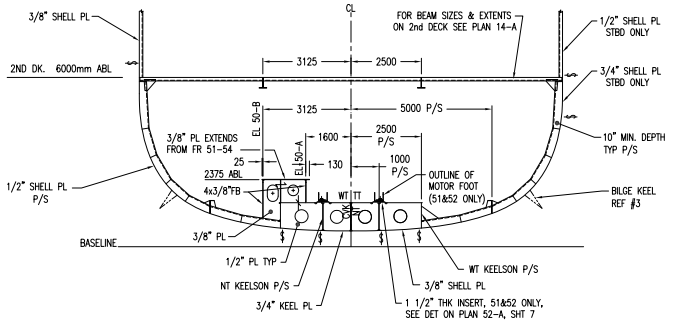
SECTION 30-D

FRAME 57
LOOKING FWD



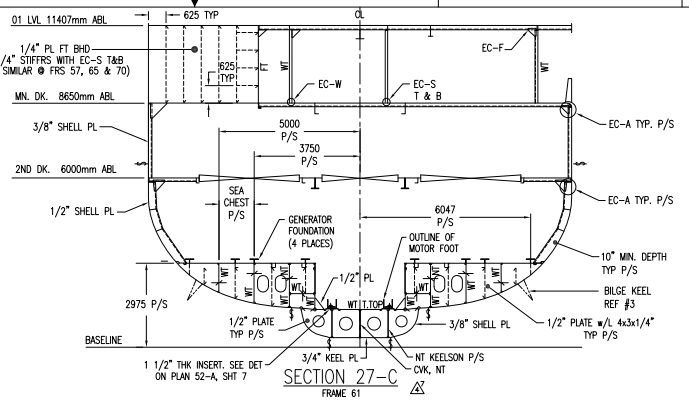
SECTION 30-C

FRAME 53
LOOKING FWD



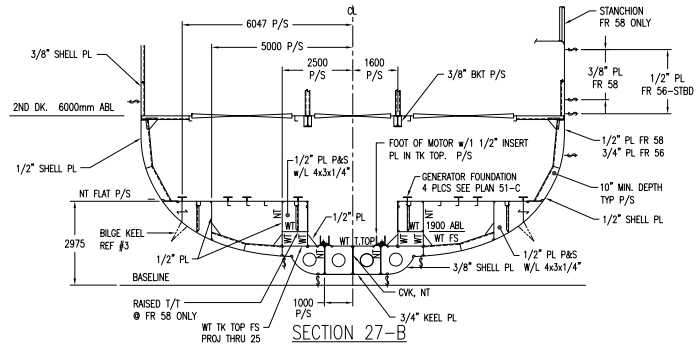
SECTION 30-A

FRAME 50
FR 51 & 52 SIM
LOOKING FWD
FDN 2375 ABL @ FRS 51 & 52 ONLY



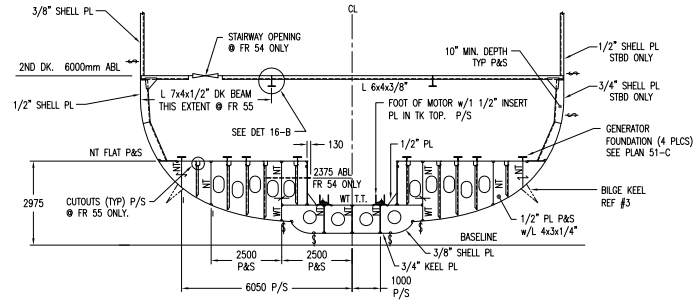
SECTION 27-C

FRAME 61
LOOKING FWD
M282 & M284 ONLY
FOR M283 SEE SECTION 63-B



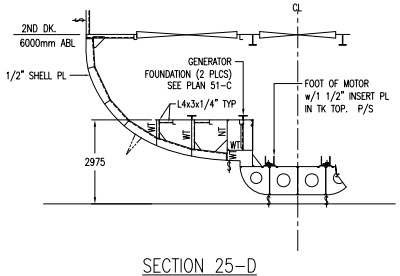
SECTION 27-B

FRAME 58
LOOKING FWD
(FR 56 SIMILAR)



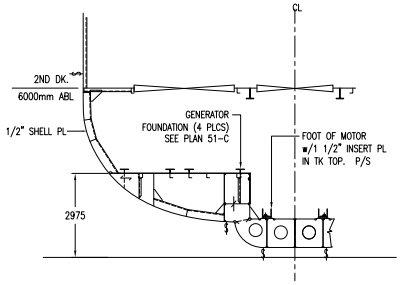
SECTION 27-A

FRAME 54
LOOKING FWD
FR 55 SIM, UNO


CL
2ND DK. 6000mm ABL
1/2" SHELL PL
GENERATOR FOUNDATION (2 PLCS) SEE PLAN 51-C
FOOT OF MOTOR w/1 1/2" INSERT PL IN TK TOP. P/S
L4x3x1/4" TYP
2975

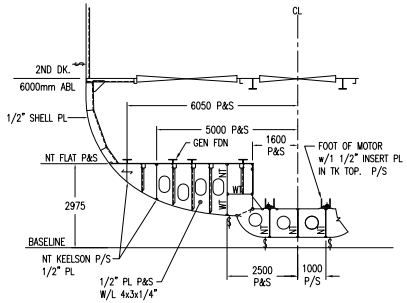
SECTION 25-D

FRAME 62
LOOKING FWD
FOR DETAILS NOT SHOWN
SEE SECTION 27-A



SECTION 25-C

FRAME 60
LOOKING FWD
FOR DETAILS NOT SHOWN
SEE SECTION 27-A



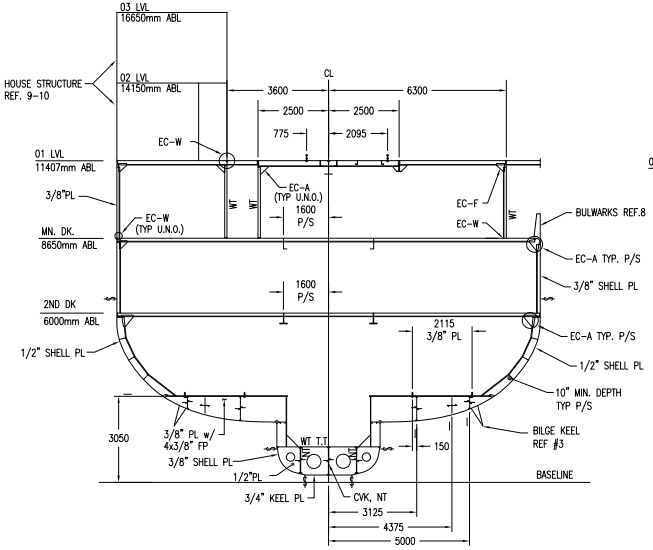
SECTION 25-A

FRAME 59
LOOKING FWD

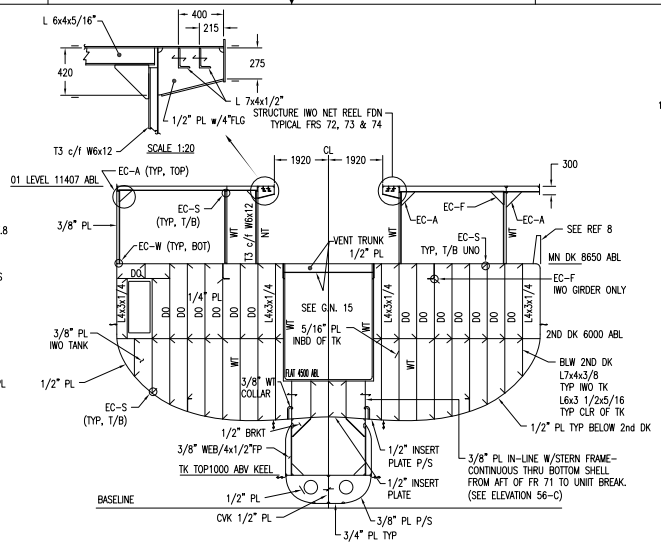
HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1953	3B213	D	M282	110	FH04	04	04
ESTIMATE NO	SCALE						
00-104	1:80		FILE R:\M282\FUNCTIONAL DESIGN\MWORK\HULLDWG\FH04_004_00.DWG			SHEET 4 OF 9	

PLOT: 1:1

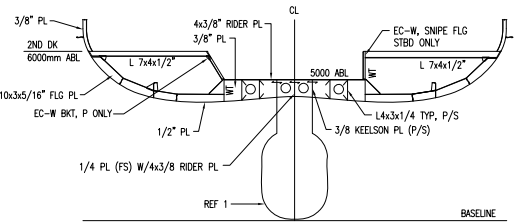
DWG NO. M282-110-FH04 SH 4



SECTION 39-C
FRAME 66
LOOKING FWD

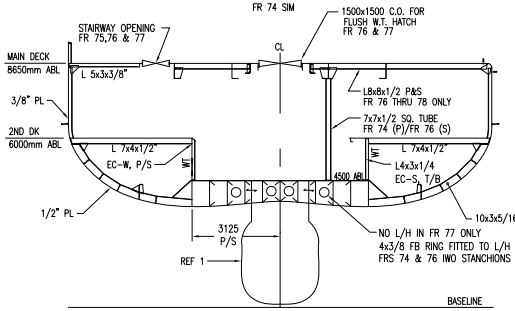


SECTION 36-C △3
FRAME 72
LOOKING FWD

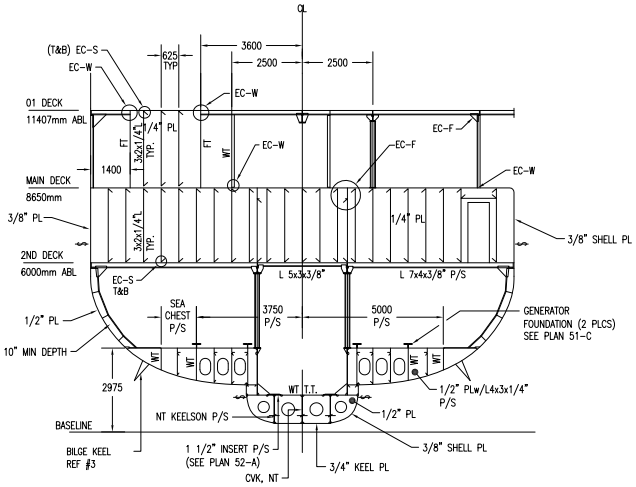


SECTION 34-D △5
FRAME 79 LKG FWD.

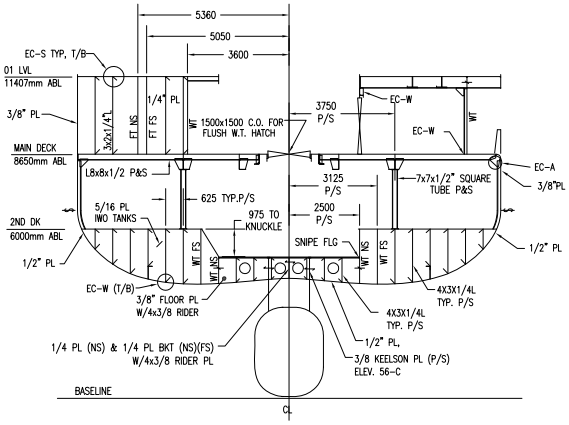
SECTION 34-C
DECK SECTION FRAME 73 LOOKING FWD
FR 74 SIM



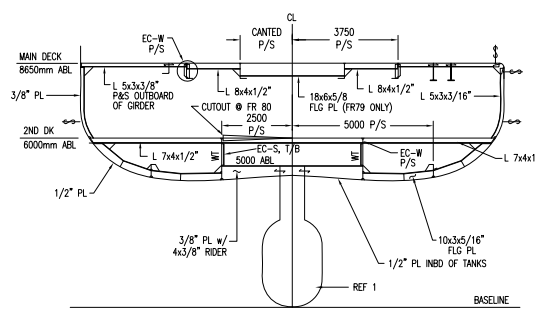
SECTION 34-B △4 △3
SEE SECTION "34-D" FOR ADD'L DETAILS
FRAME 76 LOOKING FWD
FRS 73, 74, 75 & 77 SIM



SECTION 39-A △8
FRAME 63
LOOKING FWD
M282 & M284 ONLY
FOR M283 SEE SECTION 63-A



SECTION 36-A △2
FRAME 78
LOOKING FWD

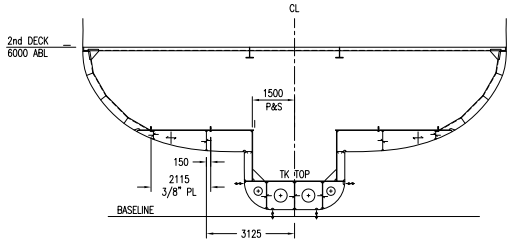


SECTION 34-A △12 △5
FR 81 LKG FWD
FR 80 SIM.

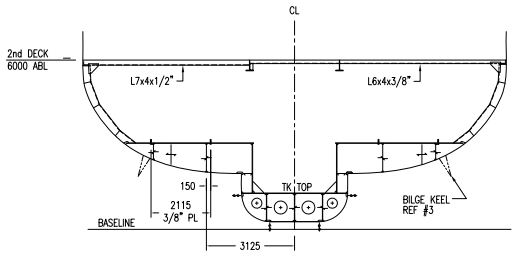
1953	3B213	D	M282	110	FH04	05	04
00-104	1:80	R:\M282\FUNCTIONAL DESIGN\NWORK\HULLDWGS	SHEET 5 OF 9				

PLOT: 1:1

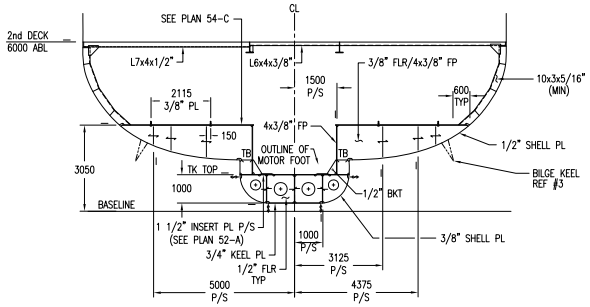
DWG NO. M282-110-FH04 SH5



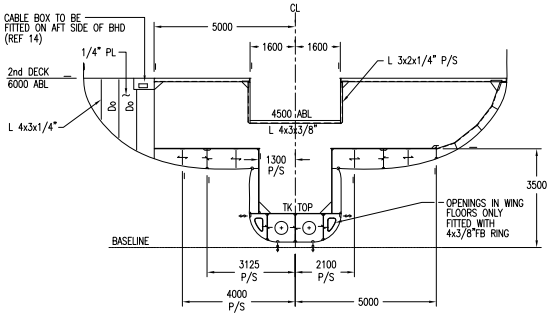
SECTION 47-C
FRAME 67
LOOKING FWD
FOR INFO NOT SHOWN, SEE SECT 47-A



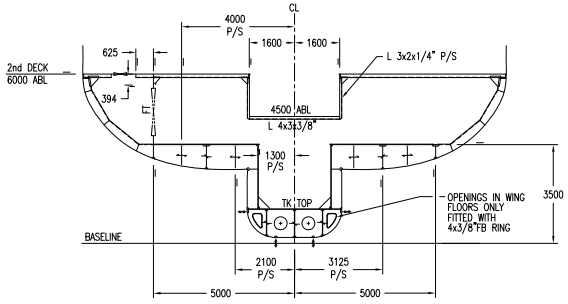
SECTION 47-B
FRAME 65
LOOKING FWD
FOR INFO NOT SHOWN, SEE SECT 47-A



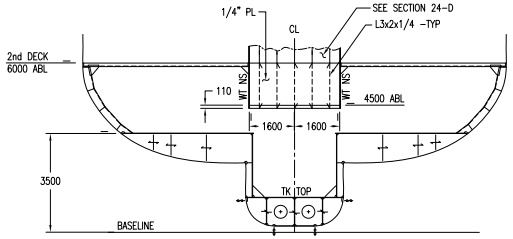
SECTION 47-A
FRAME 64
LOOKING FWD



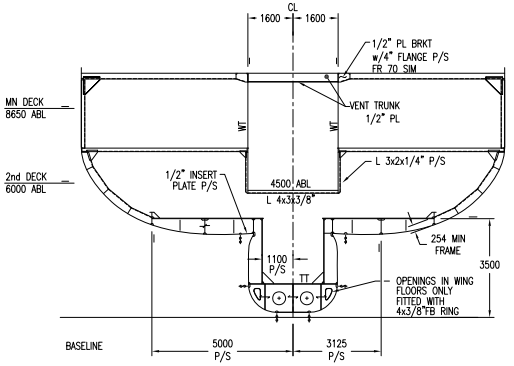
SECTION 44-C
FRAME 70
LOOKING FWD
FOR INFO NOT SHOWN, SEE SECT 47-A



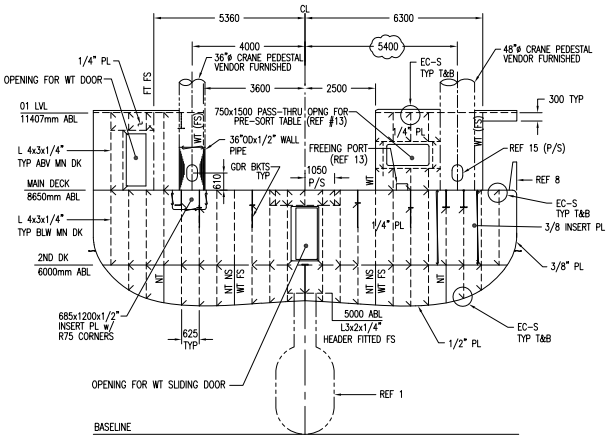
SECTION 44-B
FRAME 69
LOOKING FWD
FOR INFO NOT SHOWN, SEE SECT 47-A



SECTION 44-A
FRAME 68
LOOKING FWD
FOR INFO NOT SHOWN, SEE SECT 47-A



SECTION 42-C
FRAME 71
LOOKING FWD
FOR INFO NOT SHOWN, SEE SECT 47-A



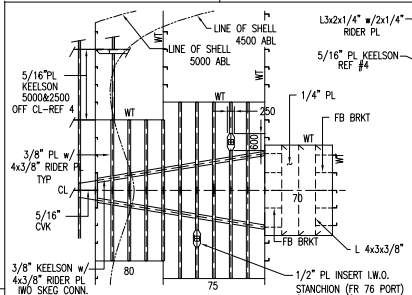
SECTION 42-A $\triangle^{13}$ $\triangle^{6}$
WT BHD @ FR 82
LOOKING FWD

HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1953	38213	D	M282	110	FH04	06	02
ESTIMATE NO	SCALE						
00-104	1:80						

FILE R:\M282\FUNCTIONAL DESIGN\NWORK\HULLDWG\FH04_006_02.DWG SHEET 6 OF 9

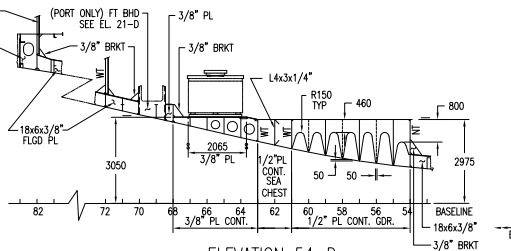
PLOT: 1:1

DWG NO. M282-110-FH04 SH 6


LINE OF SHELL 4500 ABL
LINE OF SHELL 5000 ABL
5/16"PL KEELSON 5000&2500 OFF CL–REF 4
1/4" PL
FB BRKT
3/8" PL w/ 4x3/8" RIDER PL TYP
5/16" CVK
L 4x3x3/8"
3/8" KEELSON w/ 4x3/8" RIDER PL IWO SKEG CONN. (SEE ELEV 56–C)
1/2" PL INSERT I.W.O. STANCHION (FR 76 PORT) (FR 74 STBD)

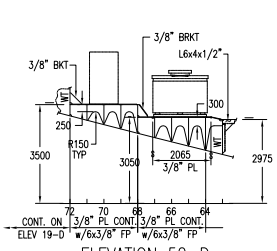
PLAN 55–C

5000/4500 ABL



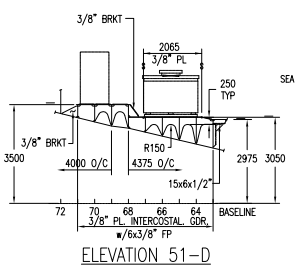
ELEVATION 54–D

GDR 5000 OFF CL
PORT SIDE SHOWN LKG OUTBD UNO
STBD SIM BUT OPP HAND



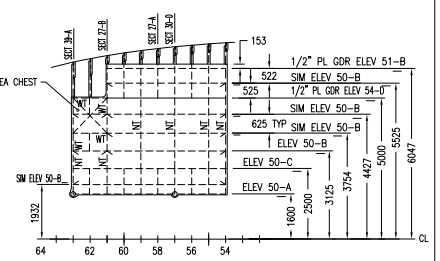
ELEVATION 52–D

GDR 3125 OFF CL
PORT SIDE SHOWN LKG OUTBD
STBD SIM BUT OPP HAND

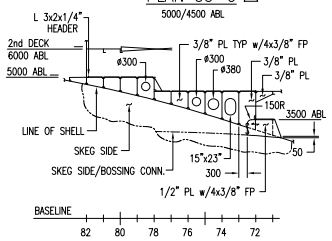


ELEVATION 51–D

GDR 4000/4375 OFF CL
PORT SIDE SHOWN LKG OUTBD
STBD SIM BUT OPP HAND

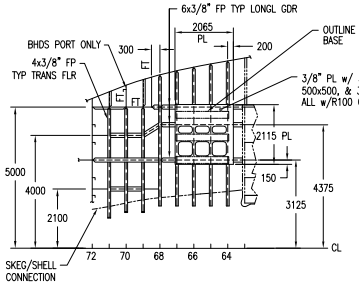


PLAN 50–D



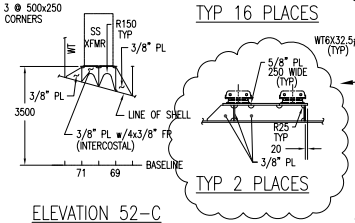
ELEVATION 56–C

GIRDER IWO OF SKEG CONNECTION



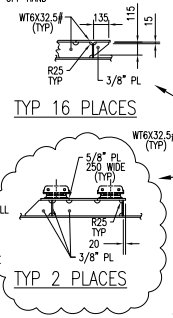
PLAN 54–C

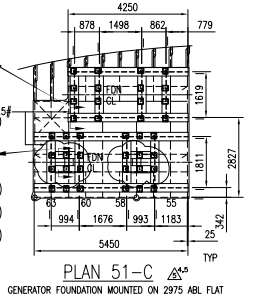
PLAN OF FLOOR & GDR FP's
PORT SHOWN, STBD SIM BUT O.H. UNO



ELEVATION 52–C

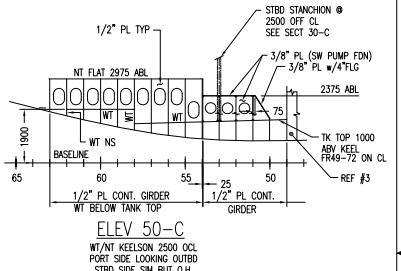
GDR 2100 OFF CL
PORT SIDE SHOWN LKG OUTBD
STBD SIM BUT OPP HAND





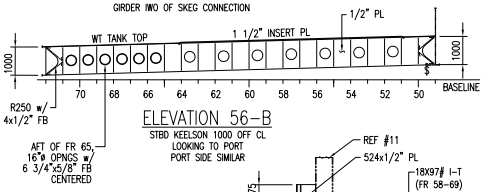
PLAN 51–C

GENERATOR FOUNDATION MOUNTED ON 2975 ABL FLAT
PORT SIDE SHOWN, STBD SIDE SIM, BUS OPP. HAND UNO
M282 ONLY, FOR M283/M284 SEE SH 9



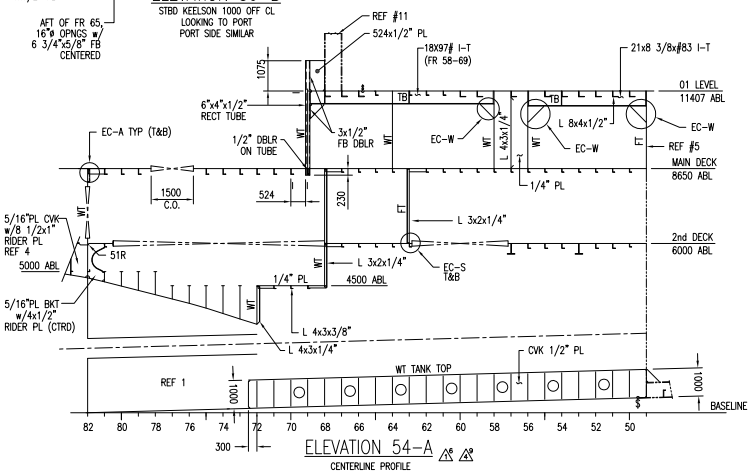
ELEV 50–C

WT/NT KEELSON 2500 OCL
PORT SIDE LOOKING OUTBD
STBD SIDE SIM BUT O.H.



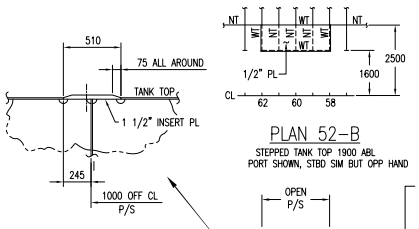
ELEVATION 56–B

STBD KEELSON 1000 OFF CL
LOOKING TO PORT
PORT SIDE SIMILAR



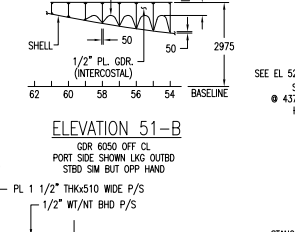
ELEVATION 54–A

CENTERLINE PROFILE
LOOKING TO PORT
M282 & M284 ONLY
FOR M283 SEE ELEVATION 59–A



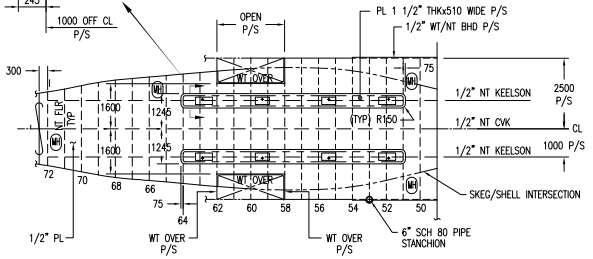
PLAN 52–B

STEPPED TANK TOP 1900 ABL
PORT SHOWN, STBD SIM BUT OPP HAND



ELEVATION 51–B

GDR 6050 OFF CL
PORT SIDE SHOWN LKG OUTBD
STBD SIM BUT OPP HAND

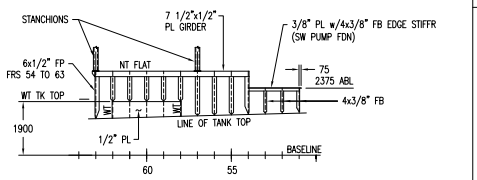


PLAN 52–A

TANK TOP 1000 ABV KEEL
@ FR 49 & FR 72
(TT HEIGHT ABV KEEL TO BE CONFIRMED WHEN
DETAILS OF PROPULSION MOTOR HOLD DOWN BECOME AVAILABLE)

ELEV 50–B

GIRDER 3125 OCL
PORT SIDE LOOKING OUTBD
STBD SIDE SIM BUT O.H.
GIRDERS @5525,4417&3750 OFF CL SIM



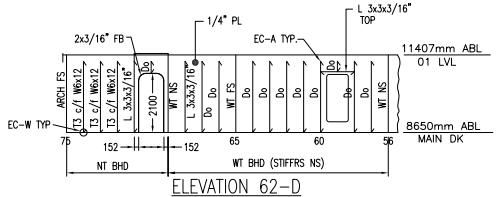
ELEV 50–A

GIRDER 1600 OCL
PORT SIDE LOOKING OUTBD
STBD SIDE SIM BUT OPP HAND

DRAWING NO.	DESIGN CODE	SCALE	JOB NO.	BOOK	SHEET NO.	REV
1953	3B213	D	M282	110	FH04	07	05
CONTRACT NO.	DRAWN					
00–104	1:80		R:\M282\FUNCTIONAL DESIGN\NWORK\HULLDWG\FH04-007-01.DWG		SHEET 7 OF 9	

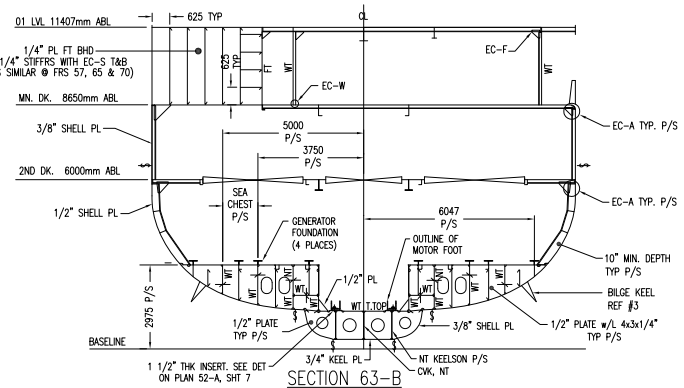
PLOT: 1:1

DWG NO. M282–110–FH04 SH7



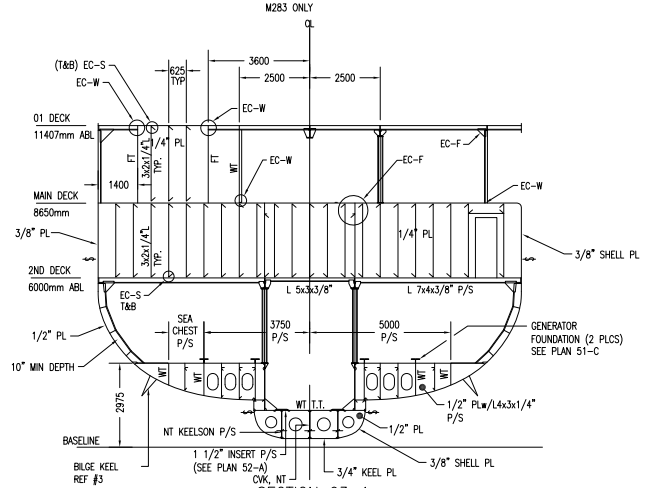
ELEVATION 62-D

NT/WT LONG'L BHD 2500 OCL PORT
LKG OUTBD
M283 ONLY



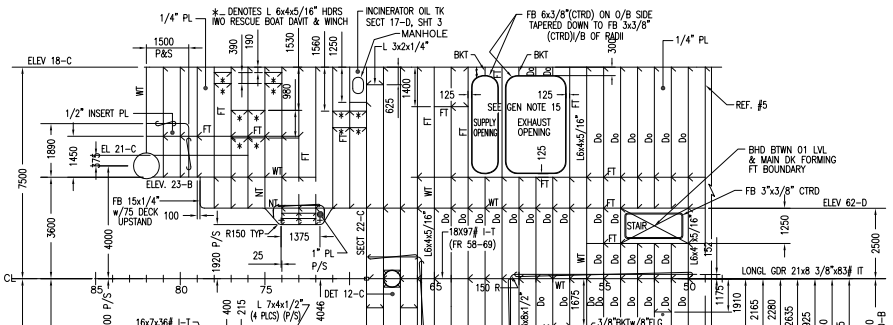
SECTION 63-B

FRAME 61
LOOKING FWD
M283 ONLY



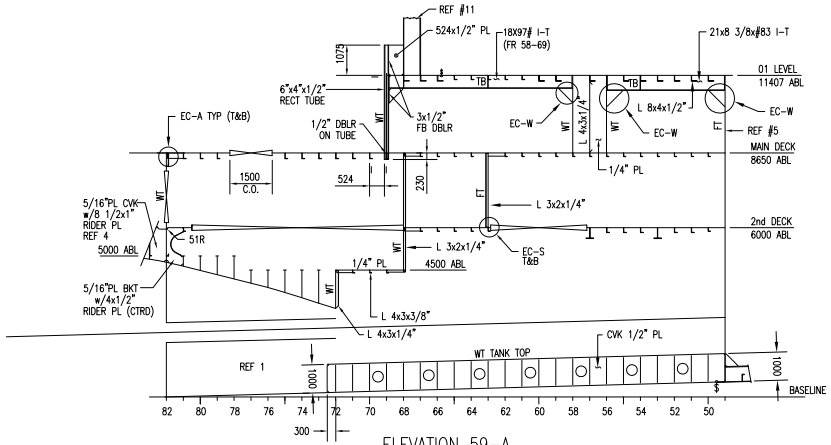
SECTION 63-A

FRAME 63
LOOKING FWD
M283 ONLY


1/4" PL
* DENOTES L 6x4x5/16" HDRS IWO RESCUE BOAT DAVIT & WINCH
INCINERATOR OIL TK SECT 17-D, SHT 3
MANHOLE
L 3x2x1/4"
FB 6x3/8"(CTRD) ON O/B SIDE TAPERED DOWN TO FB 3x3/8" (CTRD)/B OF RADII
ELEV 18-C
1500 P&S
BKT
SEE GEN NOTE 15
SUPPLY OPENING
EXHAUST OPENING
REF. #5
1/2" INSERT PL
EL 21-C
ELEV. 23-B
FB 15x1/4" w/75 DECK UPSTAND
BHD BTWN 01 LVL & MAIN DK FORMING FT BOUNDARY
FB 3"x3/8" CTRD
ELEV 62-D
18X97# I-T (FR 58-69)
R150 TYP
1375
1" P/S
1920 P/S
SECT 22-C
STAIR
LONGL GDR 21x8 3/8"x83# IT
DET 12-C
150 R
16x7x36# I-T FRS 78&79
ELEV 24-B
L 7x4x1/2" (4 PLCS) (F/S)
3/8"BKTw/6"FLG
15x1/2"WEBw/6 1/2x1/2"FB
7x7x1/2" HS UNDER
ELEV 20-C
15x6x1/2 FLG PL FR 73&74
ELEV 23-A
WEAT
L5x3x3/8"
EC-W FR 69-77
L5x3x5/16" HDRS IWO SIDE "A" FRAME
3/4" PL
FB 19 1/2x1/4" w/75 DECK UPSTAND (IWO TRANSV FR 78 & 79 ONLY)
L6x4x5/16" TYP OUTBD OF LONGL BHD (UNO)
L8x8x1/2"
L5x3x5/16" HDRS FR 57 TO 59
6"ø SCH 80 PIPE STANCHION UNDER "A" FRAME, STBD ONLY.
3/4" PL BRKT (FULL PENETRATION WELD ONE SIDE ONLY)
24 1/2x3/4 WEB W/14 1/2x1 1/2 FLG (TYP CRANE BACK-UP STRUCTURE)
DENOTES L 5x3 1/2x1/4" HEADER UNDER DECK IWO HYDROGRAPHIC WINCHES

PLAN 59-B

01 LEVEL - 11407mm ABL
M283 ONLY

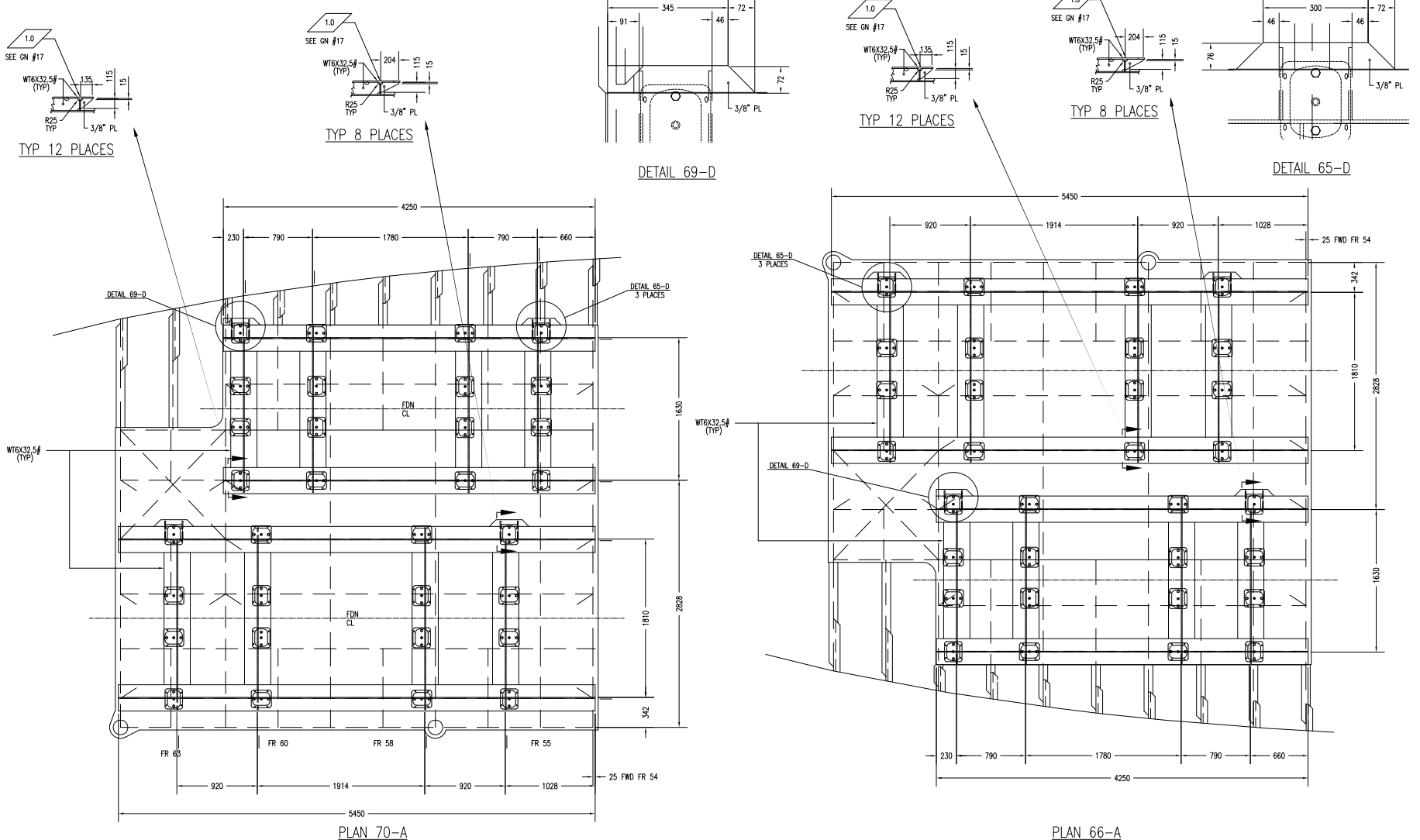


ELEVATION 59-A

CENTERLINE PROFILE
LOOKING TO PORT
M283 ONLY

1953	3B213	D	M282	110	FH04	08	04
00-104	1:80	R:\M282\FUNCTIONAL DESIGN\NWORK\HULLDWG\FH04_002_03.DWG	SHEET 8 OF 9				PLOT: 1:1

DWG NO. M282-110-FH04 SHT 8


1.0
SEE GN #17
WT6X32.5# (TYP)
135
115
15
R25 TYP
3/8" PL
TYP 12 PLACES
TYP 8 PLACES
345
72
91
46
DETAIL 69-D
300
46
76
DETAIL 65-D
4250
230
790
1780
790
660
DETAIL 69-D
DETAIL 65-D 3 PLACES
FDN CL
1630
1810
2828
342
FR 63
FR 60
FR 58
FR 55
25 FWD FR 54
920
1914
1028
5450
PLAN 70-A
GENERATOR FOUNDATION MOUNTED ON 2975 ABL FLAT
PORT SIDE SHOWN
FOR UNDERDECK STRUCTURE SEE PLAN 50-D
M283 & M284 ONLY
PLAN 66-A
GENERATOR FOUNDATION MOUNTED ON 2975 ABL FLAT
STBD SIDE SHOWN
M283 & M284 ONLY
DWG NO: M282-110-FH04 Sht 9
1953
3B213
D
M282
110
FH04
09
05
00-104
1:80
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SHEET 9 OF 9
PLOT: 1:1